

Utah's AIS Management Plan

Action Plans and Hazard Analysis Critical Control Point Plans for Utah

Already, several action plans dealing with AIS exist within Utah (e.g. National Park Service's "Zebra Mussel Prevention at Glen Canyon National Recreation Area;" Utah Division of Wildlife Resources' "Action Plan for Containment of Quagga Mussel at Lake Powell," "Quagga Mussel Education and Implementation Plan," and "New Zealand Mudsail (*Potamopyrgus antipodarum*) Management Plan For Loa Hatchery"). The same is true for Hazard Analysis Critical Control Point plans that in-part address AIS in Utah (e.g. U.S. Fish and Wildlife Service's "Utah Field Office Hazard Analysis Critical Control Point Plan," "Ouray National Hatchery Hazard Analysis Critical Control Point Plan," "Jones Hole National Hatchery Hazard Analysis Critical Control Point Plan;" and Utah Division of Wildlife Resources' 12 Utah State Fish Hatchery Hazard Analysis Critical Control Point plans—Fish Experiment Station, Loa, Midway, Kamas, Springville, Whiterocks, Mantua, Glenwood, Egan, Mammoth Creek, Wahweap, and Fountain Green). Others action plans and Hazard Analysis Critical Control Point plans will likely result, providing greater focus for AIS management at specific locales in Utah.

Purpose of Utah's AIS Management Plan

In 2008, Utah Division of Wildlife Resources formed and chaired a Utah Aquatic Invasive Species Task Force for the purpose of developing and implementing this Utah Aquatic Invasive Species Management Plan. Members of the task force represent multiple tribal, federal, state, local and private conservation entities, and they are listed in the Acknowledgements section of this plan. Plan implementation is ongoing, and each entity of the task force shoulders varying degrees of responsibility for program conduct, which is determined by their statutory authority and budget strength during individual years. An Implementation Table for the plan is presented as Appendix K.

The primary purpose for a Utah Aquatic Invasive Species (AIS) Management Plan is to develop and document a program and associated protocols to be implemented for AIS management within Utah. The Utah plan has been developed to be strategic in scope; it will serve as the foundational document to guide planning and to conduct work as it relates to AIS in Utah. And, at times it will serve as a supportive document for AIS grant applications. The plan will undoubtedly be the base from which other AIS action plans tier.

The Utah Division of Wildlife Resources has committed numerous full time equivalencies (25.21) to the Utah AIS program as follows:

- Statewide AIS Coordinator;
- Outreach Specialist;
- 5 Regional AIS Biologists;
- 35 Wildlife Technicians (seasonal watercraft inspectors);
- 5 Conservation Officers to assist as needed with AIS enforcement issues.

Additionally, Utah Division of Wildlife Resources has secured \$2.5 million from Utah's Legislature for AIS program work in FY2008 and FY2009, of which \$1.4 million is ongoing General Funds. Multiple outreach products--brochures, flyers, signs and billboards, 26 trailer mounted decontamination units, and routine operational costs for Utah Division of Wildlife Resources' staff are supported by the funds. Implementation of this plan is entirely dependant upon sufficient budget being made available.

The U.S. Fish and Wildlife Service's Denver Colorado Regional Office maintains an Aquatic Nuisance Species Coordinator. The U.S. Forest Service's Intermountain Regional Office in Ogden, Utah maintains an Aquatic Nuisance Species Coordinator, too. And, the Bureau of Reclamation's Regional Office in Salt Lake City, Utah also maintains an intra-agency AIS task force. All three of these agencies serve on the Utah AIS Task Force. Each position is funded by its respective agency such that significant programmatic support is directed toward implementation of Utah's AIS Management Plan.

All of the other Utah AIS Task Force members have additional agency roles besides their assignment to the Utah AIS Task Force. They are individually committed to keep AIS in strong focus within their respective agencies, including the provision of funds and personnel, when possible, for in-the-field operations.

Goal of Utah's AIS Management Plan

The goal of the Utah AIS Management Plan is to improve the ability of natural resource management entities within Utah to prevent invasion of AIS into the state, and to contain AIS through accepted management practices to areas that are either already infested or become infested.

Objectives and Strategies of Utah's AIS Management Plan

Outreach Objective: The Utah AIS Management Plan will establish and increase outreach efforts directed at public education. The intent is so Utah's public, particularly the media, governmental agencies, outdoor-associated recreational organizations, boaters, and anglers will realize the threats and impacts from AIS, and become partners in AIS education, interdiction and decontamination, as well as management.

- **Media Strategy:** Coordinate Utah's media (national, regional, statewide and local newspapers, magazines, radio stations and television stations, including targeted programming ("Utah at Your Leisure" and "Roughin It Outdoors") to repeatedly tell the AIS story, by identifying opportunity for the media to market their publications and broadcasts, promoting the "Stop Aquatic Hitchhikers" slogan in combination with the decontamination protocols.
- **Public Education Strategy:** Educate the public, particularly Utah boaters, at a variety of venues (e.g. organized angler and boater meetings, International Sportsman Expo, Greenspan Boat Show, Garden Show, state

and county fairs, launch sites and Utah's Ports of Entry) about AIS. The process will be to explain the AIS issue, and encourage the public to spread the "word," creating peer pressure for decontamination compliance. This strategy also includes presentations to natural resource management agencies within Utah and across the west about the AIS issue.

- Pursue cooperative opportunities to expand the education strategy to venues like the Living Aquarium and their educational van (they visit schools in the Wasatch Front area of Utah), Hogle Zoo and their docent education program (they visit schools statewide), and the Utah Natural History Museum, all located in Salt Lake City, UT.
- Display AIS outreach product produced by Utah Division of Wildlife Resource statewide (e.g. highway billboards, tailgate wraps on UDWR trucks, boat launch ramps, water-based recreation areas, boat dealers and marine repair shops, restaurants, local dive shops, and sporting good stores).
Note: Cabela's and Sportsman Warehouse outlets are each willing and have facilities that can be used for public AIS presentations.
- Pursue opportunity to make AIS presentations at venues where water user groups gather (e.g. Utah Water Users Conference, river basin meetings, water rights managers meeting, etc.).
- **Next Generation Education Strategy:** Coordinate with Utah's educators in concurrence with the state science coordinator to educate the next generation of boaters by developing formalized in-class-room tutorials for secondary level school teachers to present to their students. The educational content must correlate to Utah's core curriculum and be done in cooperation with Project WILD.
- This strategy also includes web site development for AIS message delivery, and the sharing of educational material amongst educators, the Utah AIS Task Force and other states.
- Coordinate with appropriate local university and college personnel to make AIS presentations to their students, either in classroom settings or as a visiting lecturer at organized symposiums.

Interdiction and Decontamination Objective: The Utah AIS Management Plan will facilitate increased interdictions of boats and equipment contaminated with AIS, requiring decontamination under authority of the Utah Aquatic Invasive Species Interdiction Act and Rule R657-60 Aquatic Invasive Species Interdiction in order to control the spread of AIS.

- **Interdiction Strategy:** Utah Division of Wildlife Resources' staff, including authorized volunteers, Utah Peace Officers, which includes Conservation Officers and state Park Rangers, and Utah Department of Transportation Port of Entry Agents, under authority of the Utah Aquatic Invasive Species Interdiction Act, and other properly trained natural resource management personnel, will interdict boats at launch ramps, administrative check sites, and Utah's Ports of Entry to detect boats and equipment contaminated with AIS.
- **Decontamination Strategy:** Boat owners and operators will be contacted in-the-field or at a variety of other venues, including through media publications or broadcasts, one-on-one education or at group presentations, in order to tutor them about AIS. The boaters will be provided guidance about how to decontaminate their watercraft and equipment as per established protocols.
 - **Do-it-Yourself Decontamination:** Boat owners must clean and drain their boat and equipment as they leave a water body, then dry it for an appropriate amount of time between boating trips at home.
 - Clean mud, plants, animals or other debris from boat or equipment;
 - Drain the ballast tanks, bilge, live wells, and motor;
 - Dry boat and equipment for 7 days summer, 18 days spring or fall, or freeze the boat and equipment in winter for 3 days;

or

- **Professional Decontamination:** Utah Division of Wildlife Resources' AIS Team (Appendix H), including authorized volunteers, Utah Peace Officers, which includes Conservation Officers and state Park Rangers, and Utah Department of Transportation Port of Entry Agents, under authority of the Utah Aquatic Invasive Species Interdiction Act, and other properly trained persons, will decontaminate boats and equipment infested with AIS as per established protocols (Appendix I). This effort due to capitalistic opportunity is intended to induce proper decontaminations by private vendors.
 - Wash the trailer and boat inside and out, including flush ballast tanks, bilge, live wells and motor with high pressure, 140 degree scalding water.

Management Objective: The Utah AIS Management Plan will facilitate opportunity to apply contemporary natural resource management practices in order to regulate,

control and eradicate AIS, allowing rehabilitation of infested areas followed by documented monitoring of success in all phases of management.

- **Plan Development Strategy:** Utah Division of Wildlife Resources will prepare, implement and maintain a Utah Aquatic Invasive Species Management Plan, including periodic updates as scientific information evolves regarding AIS management, in concurrence with the Utah Aquatic Invasive Species Task Force and the U.S. Fish and Wildlife Service's national Aquatic Nuisance Species Task Force.
- **Public Review Strategy:** Utah Division of Wildlife Resources subjected the draft Utah Aquatic Invasive Species Management Plan to a public review process that included Utah Division of Wildlife Resources' five Regional Advisory Councils located throughout Utah, approval by the Utah Wildlife Board (Appendix G). Once approved by the Utah Wildlife Board occurred, approval by the Utah Governor's Office was secured. Then, ultimate approval by the U.S. Fish and Wildlife Service's national Aquatic Nuisance Species Task Force ensued.

The Utah Wildlife Board via the five regional advisory councils, as a matter of normal procedure, will re-review the plan every five years once it is approved.

- **Implementation Strategy:** Utah Division of Wildlife Resources will work with Utah's Department of Natural Resources, Utah's Legislature, Utah AIS Task Force and other natural resource management entities to secure adequate funding and cooperation for plan implementation and continuance.
- **Research and Technology Strategy:** Utah Division of Wildlife Resources has already contacted Utah State University's Fish and Wildlife Department to assess early detection methodologies, particularly biological arrays using protein markers for identification. Additionally multiple researchers at various labs have been queried about the multiple, different deoxyribonucleic acid polymerase chain reaction tests (PCR) that are available. Further research may evolve based upon findings, need and available funds. It is intended that funds will be secured to maintain a long-term graduate research effort at Utah State University to be directed toward AIS issues.

Additionally, Utah Division of Wildlife Resources Fishery Experiment Station, working in concert with Utah's other state fish hatcheries and other research institutions across the nation, perpetually assesses new and different methodologies to protect aquatic animals from AIS.

- **Control and Restoration Strategy:** The control of AIS is problematic to the extent that all the different species require varying approaches. For some species control or containment methods are poorly understood, although interest across the world is high, so research is ongoing. Findings from that research will be implemented as appropriate and practicable in Utah. The strongest control approach is to simply focus upon keeping AIS out of Utah or contained to areas already infested.

Boaters launching in Utah within 30 days from being on an AIS infested water will be requested to self-certify pre-launch that they have either implemented a “do-it-yourself” decontamination protocol or a “professional” decontamination protocol. These are pre-launch requirements in the case of *Dreissenid* mussels.

Boaters leaving infested waters in Utah (to date only Electric Lake is infested with zebra mussels, although Lake Powell is suspect or at least highly threatened with contamination by *Dreissenid* mussels) will be compelled to decontaminate their watercraft and equipment prior to launching on another water.

Mitigation or restoration of damaged habitats is routine business for Utah Division of Wildlife Resources and its other natural resource management partners, as is the re-stocking of aquatic animals, when appropriate. Best management practices will be employed for every operation.

- **Monitoring and Evaluation Strategy:** Monitoring for invasions of AIS or spread of existing AIS is a significant challenge as compared to monitoring and evaluation for control and restoration work. Utah AIS Task Force members and agencies will keep track of invasions of AIS or spread of existing AIS, documenting change in conditions annually.

Evaluation is for the most part, “cut and dry.” “Did the Utah AIS Task Force successfully keep AIS out of Utah or contained to existing infested areas, and to what degree are control and restoration strategies successful?” Annual reports summarizing AIS work in Utah, including monitoring, will be coordinated and prepared by the Utah Division of Wildlife Resources and provided to the U.S. Fish and Wildlife Service’s Regional AIS Coordinator (Erin Williams, U.S. Fish and Wildlife Service, Denver, CO) beginning in December 2008.